

# Work Order ID 68812

Thursday, April 21, 2011 10:37:06 AM



Page 1

Item ID:	D3954-3	Accept		Setup	Start	
Revision ID:						
Item Name:	GWT Knob			Stop		
Start Date:	4/26/2011	Start Qty:	10.00			
Required Date:	5/6/2011	Req'd Qty:	10.00			
Reference:						

Approvals:	Process Plan:	<u>CMF</u>	Date:	<u>11-04-21</u>	Tooling:		Date:		Run	Start	
	QC:		Date:		SPC (Y/N):		Date:		Stop		

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr								
D3954	B								

100		0.00							
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Waterjet

FLOW CNC Waterjet

## Memo

1-Cut as per Dwg D3854

Dwg Rev: B

Prog Rev: B

2-Deburr if necessary

0.00

EB 4/25/10

110	QC2- Inspect parts off machine FAI/FAIB	0.00							
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QC

Quality Control

## Memo

0.00

B11-5-8

(14)

(PTO)

B11-5-8

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE		By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D3954-3 PAR #: \_\_\_\_\_ Fault Category: Prod/Eng NCR: Yes No DQA: A Date: 11.05.27  
11-1026 Resolution: Scrap Disposition: Scrap QA: N/C Closed: CL Date: 11/05/27

NCR: <u>69812</u>		WORK ORDER NON-CONFORMANCE (NCR) <u>\$14.72</u>						
DATE	STEP	Description of NC Section A	Corrective Action			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
<u>11/05/14</u>	<u>#120</u>	<u>Found that Qty x3 parts were cut too small. 2.00" dia is under tol. + the hole size is larger than the tap drill size</u>	<u>S</u> <u>11/05/14</u>	<u>- Scrap + Destr</u> <u>Re-use Qty x3</u>	<u>→</u> <u>11-5-11</u>	<u>S</u> <u>11/05/14</u>	<u>[Signature]</u> <u>QSR</u>	<u>S</u> <u>11/05/11</u>
		<u>(Tap Drill Size 37/64 [0.578])</u> <u>hole size .625"</u> <u>R.L. Program error</u>	<u>S</u> <u>11/05/14</u>	<u>- Fix Program</u>	<u>→</u> <u>11.05.27</u>	<u>S</u> <u>11/05/14</u>	<u>[Signature]</u> <u>QSR</u>	<u>S</u> <u>11/05/14</u>

NOTE: Date &amp; initial all entries

**Work Order ID 68812**

Thursday, April 21, 2011 10:37:06 AM



Page 2

Item ID: D3954-3

Accept



Setup Start



Revision ID:

Stop



Item Name: GWT Knob

Start Date: 4/26/2011 Start Qty: 10.00



Cust Item ID:

Required Date: 5/6/2011 Req'd Qty: 10.00



Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start



QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

120



QC

Quality Control

QC8- Inspect parts - second check

0.00

S 4/25/11

0.00

Memo

(44)

(43)

130



Mill Conv

Conventional Milling Machine

Memo

1-OPEN TO TAP DRILL SIZE

2-TAP AS PER DWG D3954

0.00

0.00

S 4/25/11

(11)

140



QC

Quality Control

QC5- Inspect part completeness to step on W/O

0.00

0.00

S 4/25/11

(46)

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE		By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)							
DATE	STEP	Description of NC Section A	Corrective Action		Section B		Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date				

NOTE: Date & initial all entries

# Work Order ID 68812

Thursday, April 21, 2011 10:37:06 AM



Page 3

Item ID: D3954-3

Accept



Setup Start



Revision ID:

Item Name: GWT Knob

Stop



Start Date: 4/26/2011 Start Qty: 10.00



Cust Item ID:

Required Date: 5/6/2011 Req'd Qty: 10.00



Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run Start



Stop



Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID

Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

150



SprayPaint

Spray Painting

Memo

1- MASK THREADS PRIOR TO PAINTING AS PER DWG

2- SPRAY PAINT YELLOW AS PER DWG  
A/R BATCH:

0.00

0.00

11

OK 11-5-25.

160



QC

Quality Control

QC14- Inspect Spray Paint

Memo

0.00

0.00

START. 8:30  
QUANT. 300  
FINISH 9:00

8 11/5/27

170



Packaging

Packaging

Identify as per dwg & Stock Location:

0.00

Memo

0.00

11/5/27 11

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE		By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)							
DATE	STEP	Description of NC Section A	Corrective Action		Section B		Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng		Sign & Date			

**NOTE:** Date & initial all entries

**Work Order ID 68812**

Thursday, April 21, 2011 10:37:07 AM



Page 4

Item ID: D3954-3

Accept



Setup Start



Revision ID:

Item Name: GWT Knob

Stop



Start Date: 4/26/2011 Start Qty: 10.00



Cust Item ID:

Required Date: 5/6/2011 Req'd Qty: 10.00



Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start



QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

180

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

11/5/27

11-05-27

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE		By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)							
DATE	STEP	Description of NC Section A	Corrective Action		Section B		Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng		Sign & Date			

**NOTE:** Date & initial all entries



# Picklist Print

Thursday, April 21, 2011 10:37:02 AM

Page 1

Work Order ID: 68812



Parent Item: D3954-3



Parent Item Name: GWT Knob

Start Date: 4/26/2011

Required Date: 5/6/2011

Start Qty: 10.00

Required Qty: 10.00

## Comments:

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M1010B0.375X03.500		Purchased	No			100	f	7.5800	0.02778	0.292421			



1010-1025 Steel Bar .375 x 3.500



B11-5-13

### Location

### Loc Qty

### Loc Code

MAT036

7.58

110740

7.58

110740

(13)

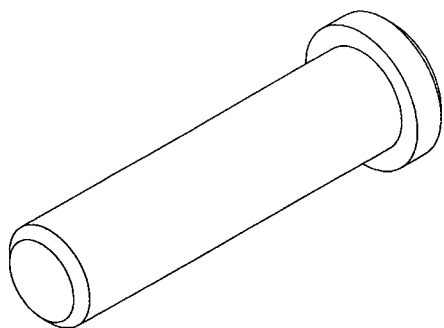
W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE		By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

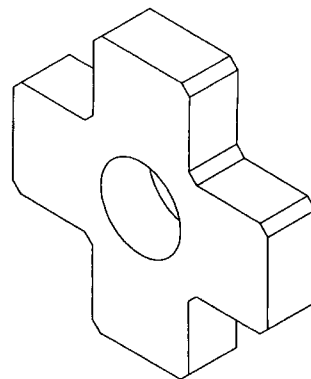
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DATE	STEP	Description of NC Section A	Corrective Action		Section B		Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng		Sign & Date			

**NOTE:** Date & initial all entries

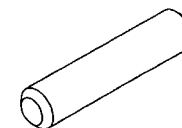


**D3954-1 GWT PIN**

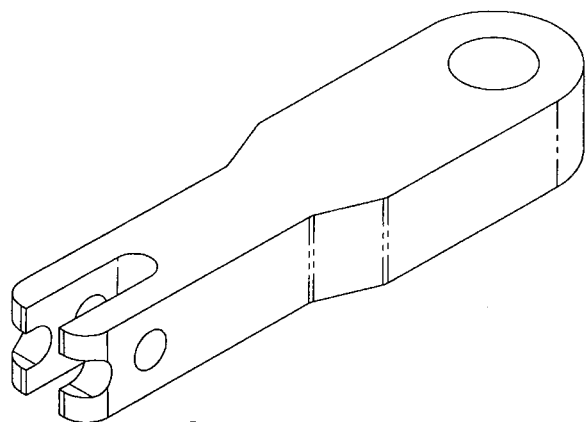


**D3954-3 GWT KNOB**

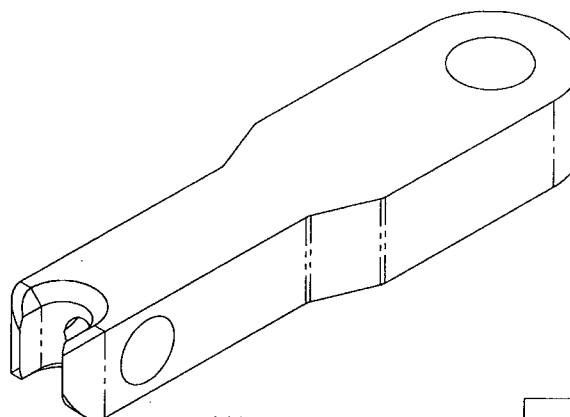
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**D3954-9 GWT CHAIN PIN**




**D3954-5 CHAIN LUG**



**D3954-7 RATCHET LUG**

**RELEASED**  
2009-10-19  
*mp*

B	MATERIAL UPDATE FOR ALL COMPONENTS WAS STAINLESS STEEL IS CARBON STEEL FOR ALL COMPONENTS. FINISH FOR ALL COMPONENTS WAS RED POWDER COAT IS YELLOW SPRAY PAINT.	AJS	09.10.15
A	NEW ISSUE	AJS	09.05.26
REV.	DESCRIPTION	BY	DATE
DESIGN	AJS/DSTOW	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
DRAWN	AJS		
CHECKED		DRAWING NO.	REV. B
MFG. APPR.		D3954	SHEET 1 OF 3
APPROVED		TITLE	SCALE
DE APPR.	N/A	MISC MACHINED PARTS GWT KIT	NTS
DATE	09.10.15	COPYRIGHT © 2009 BY DART AEROSPACE LTD <small>THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	

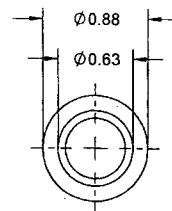
W/O:		WORK ORDER CHANGES							
DATE	STEP	PROCEDURE CHANGE		By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

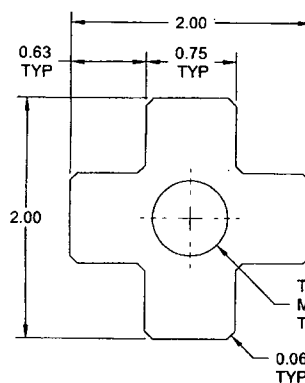
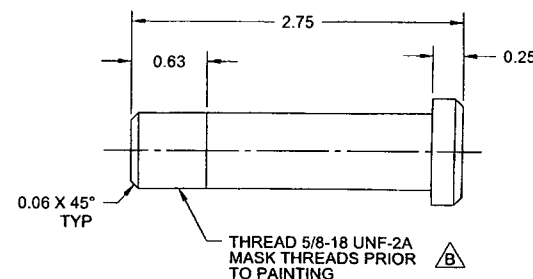
Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)							
DATE	STEP	Description of NC Section A	Corrective Action			Verification Section C	Approval Chief Eng	Approval QC Inspector	
			Initial Chief Eng	Action Description Chief Eng	Sign & Date				

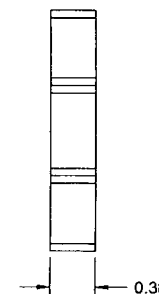
NOTE: Date & initial all entries



**D3954-1 GWT PIN**



**D3954-3 GWT KNOB**



**NOTES:**

1) MATERIAL -1: AISI 1010-1025 MILD STEEL ROUND BAR  
PER DART SPEC M1018-R

-3: AISI 1010-1025 MILD STEEL SHEET  
PER DART SPEC MS1010-S

OR: AISI 1010-1025 MILD STEEL BAR  
PER DART SPEC M1010-B

**ALTERNATE MATERIAL:**

-1: AISI 303/304 STAINLESS STEEL ROUND BAR  
REF DART SPEC M303/304R

-3: AISI 303/304 STAINLESS STEEL SHEET  
REF DART SPEC M303/304S

OR: AISI 303/304 STAINLESS STEEL BAR  
REF DART SPEC M303/304B

2) FINISH: SPRAY PAINT YELLOW WITH BERTRAND CG1031B PER DART QSI 005 4.2

3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED

4) UNITS: INCHES UNLESS OTHERWISE NOTED


5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX

6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3954-X" USING FINE POINT PERMANENT INK MARKER

7) WEIGHT -1: 0.26 lbs

-3: 0.23 lbs

**RELEASED**  
2009-10-19

DESIGN	AJS/DSTOW	<b>DART AEROSPACE LTD</b>	
DRAWN	AJS	HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. B
MFG. APPR.		D3954	SHEET 2 OF 3
APPROVED		TITLE	SCALE
DE APPR.	N/A	MISC MACHINED PARTS GWT KIT NTS	
DATE	09.10.15	COPYRIGHT © 2009 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

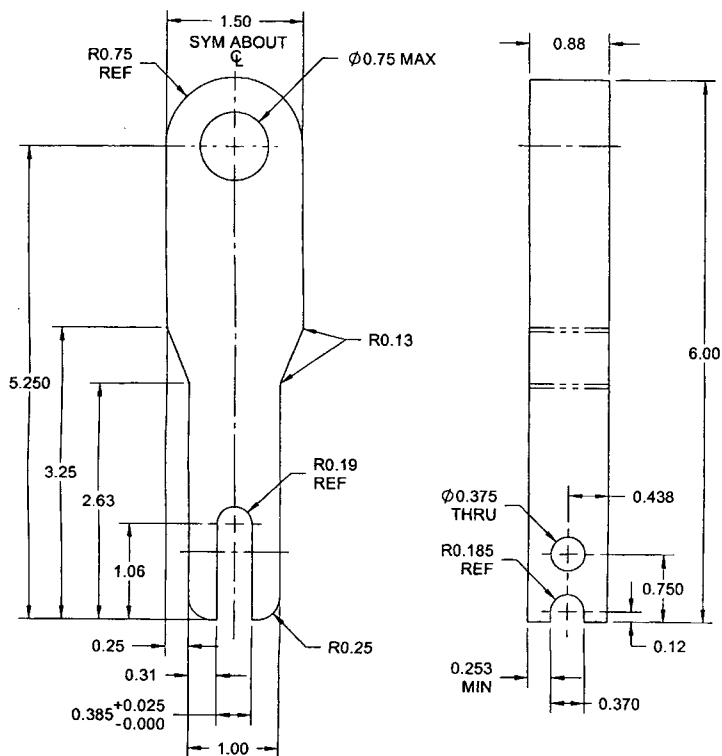
W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE		By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)							
DATE	STEP	Description of NC Section A	Corrective Action		Section B		Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng		Sign & Date			

**NOTE:** Date & initial all entries



**D3954-5 CHAIN LUG**

**NOTES:**

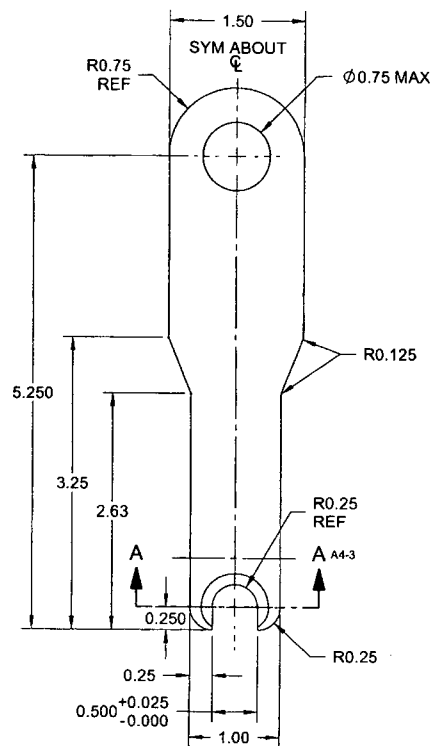
1) MATERIAL: -5/-7: AISI 1010-1025 MILD STEEL BAR  
PER DART SPEC M1010-B

9: AISI 1010-1025 MILD STEEL ROUND BAR  
PER DART SPEC M1018-R

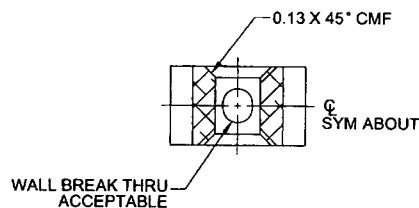
ALTERNATE MATERIAL:  
-5/-7: AISI 303/304 STAINLESS STEEL BAR  
REF DART SPEC M303/304B

-9: AISI 303/304 STAINLESS STEEL ROUND BAR  
REF DART SPEC M303/304R

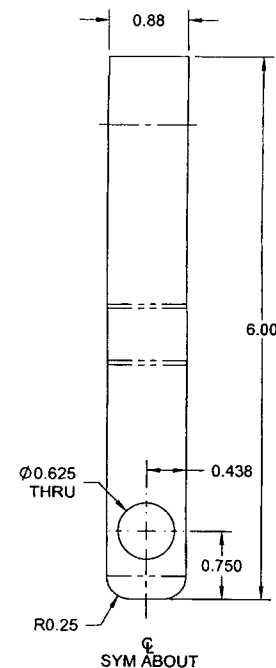
- 2) FINISH -7 ONLY: SPRAY PAINT YELLOW WITH BERTRAND CG1031B PER DART QSI 005 4.2 **B**  
3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED  
4) UNITS: INCHES UNLESS OTHERWISE NOTED  
5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX  
6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3954-X" USING FINE POINT PERMANENT INK MARKER  
7) WEIGHT -5/-7: 1.56 lbs EACH  
-9: 0.05 lbs



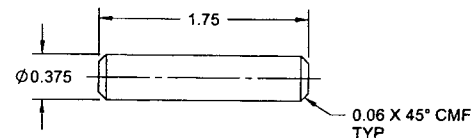
**D3954-7 RATCHET LUG**




**SECTION A-A C3-3**



**D3954-9 GWT CHAIN PIN**



DESIGN	AJS/DSTOW	<b>DART AEROSPACE LTD</b>	
DRAWN	AJS	HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. B
MFG. APPR.		D3954	SHEET 3 OF 3
APPROVED		TITLE	SCALE
DE APPR.	N/A	MISC MACHINED PARTS GWT KIT	NTS
DATE	09.10.15	COPYRIGHT © 2009 BY DART AEROSPACE LTD	
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**RELEASED**  
2009-10-19

#63812

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE		By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)							
DATE	STEP	Description of NC Section A	Corrective Action		Section B		Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng		Sign & Date			

**NOTE:** Date & initial all entries



